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THE SILVER INSTITUTE LETTER

WORLDWIDE INFORMATION ON SILVER

VOLUME XVII NUMBER 4 AUGUST 1987

WORLD USE OF SILVER IN COINAGE DOUBLED IN 1986

Five-ounce silver Chinese coin honoring Dr. Sun Yat-Sen

Worldwide use of silver in coinage increased from 13.4 million troy ounces in 1985 to 26.8 million ounces of pure silver in 1986. This silver was consumed by 73 nations in the minting of 259 issues of legal tender silver coins, according to the publication, *Modern Silver Coinage-1986*, published by The Silver Institute in Washington, D.C.

This booklet contains a new statistical table that lists the Top Ten Users of Silver in Coinage in 1986. **The five biggest users of pure silver in coinage**, in order of ounces consumed—were the United States (10.3), Japan (6.4), France (2.4), Mexico (2.0) and Canada (1.3).

Modern Silver Coinage-1986 includes another new table covering the top ten users and total global use of silver in coinage since 1977. This table shows that the 1986 leap to 26,835,587 ounces represents a **continuation of an upward trend in the use of silver in coins** that began in 1981. Only 5.9 million ounces of silver were used in coinages in 1981, but by 1983 this figure had climbed to 9.9 million ounces. And on up to 13.4 million in 1985.

This is a unique reference booklet because it is the *only* publication that offers the reader authoritative data on the percent of pure silver used in each coin, troy ounces of silver per coin, number of coins per issue, total ounces of silver used in each issue, as well as the diameter, weight and brief description of each coin.

Data published in *Modern Silver Coinage-1986* was obtained by The Silver Institute through the cooperation of ministries of finance, central banks, government and private mints, and numismatic experts throughout the world.

Modern Silver Coinage-1986 is a *limited edition*, but while supplies last, it is available for *only* $30.00 at **The Silver Institute, 1026 Sixteenth Street, N.W., Suite 101, Washington, D.C. 20036.**

SILVER WATER PURIFICATION MAY BENEFIT MILLIONS

Since 1893, medical science has used silver as a powerful bactericide and fungicide. In fact, relatively small amounts of silver in drinking water have proven effective against Salmonella bacteria and against viruses such as Herpes. And *no* studies have ever shown that silver is harmful to man.

In a long-delayed recognition of these facts, on July 8, 1987, the *Federal Register* carried an announcement of the elimination of silver from the Environmental Protection Agency's primary Threshold Limit Value list for drinking water.

This means that after observing an official five month "waiting period", **silver can once again be used to purify the water in municipal supply systems that provide drinking water for millions of U.S. homes.** This will be particularly beneficial to people living in warmer climates where the sun's heat evaporates chlorine from reservoirs, leaving drinking water unprotected against dangerous bacteria.

DRAMATIC INCREASE IN DEMAND FOR SILVER JEWELRY

U.S. imports of one classification of silver jewelry increased 89.3% from $5.6 million in 1985 to $10.6 million in 1986, according to the U.S. Department of Commerce.

If the recent Basel Fair '87 in Switzerland is an accurate indicator, global buyers confirmed the popularity of silver jewelry. They were most interested in bold, designed silver hollow chains, massive chains and patterned or cast pieces. Silver for both men and women sold well.

And in the U.S., a dramatic increase in sales of sterling silver jewelry was reported by a member of The Silver Institute. Victor Goldberg, President of **VFG Designs, Ltd.**, 25 West 45th Street, New York,

NY 10036, said that **VFG Designs' silver jewelry manufacturing business increased 110% in 1985 and 90% in 1986.** And in 1987, he projects "tremendous growth" for silver jewelry and steadily increasing demand for sterling silver tabletop and giftware.

Mr. Goldberg attributes his company's impressive growth to two factors: first, the high fashion quality of its diversified line of silver jewelry, tableware and giftware; second, excellent customer services, including a fresh outlook on design, prototypes and completed products.

However, the growth of the sterling silver business is not limited to VFG Designs, Ltd. In its March 1987 issue, *Jewelers Circular-Keystone* magazine reported, **"Silver jewelry is booming. Soaring demand has produced annual sales increases as high as several hundred percent for major silver suppliers.** Indeed, manufacturers variously describe their 1985 and 1986 sterling sales as 'astounding,' 'fabulous' and 'beyond our wildest dreams.' What's more, they predict '87 will be even better."

CANADA ISSUES 22ND COMMEMORATIVE SILVER DOLLAR

Canada's 1987 silver commemorative dollar (*pictured below*) commemorates the 400th anniversary of navigator John Davis' exploration of the Baffin Islands, Cumberland Sound and the Davis Straight in the eastern Canadian Arctic.

This .500 fine silver dollar measures 36.07mm in diameter and weighs 23.33 grams. It is the 22nd coin in a series which began in 1935 with the minting of a coin commemorating the 25th anniversary of the accession of King George V.

As with previous Canadian silver dollar commemoratives, the Royal Canadian Mint's newest silver dollar has all of the qualities desirable to collectors—limited mintage, a particularly fine design and uniqueness of subject matter.

The 1987 proof silver dollar sells for $15.00 and the brilliant uncirculated dollar, $11.00. They are available by mail order from the **Royal Canadian Mint, P.O. Box 457, Station A, Ottawa, Ontario, K1N 8V5, Canada or at coin dealers.**

INTERIOR DESIGNERS USING MORE SILVERED MIRRORS

Between 1977 and 1985, the U.S. mirror market grew 69% from $409.4 million to $693.5 million, according to the U.S. Department of Commerce's latest Annual Survey of Manufacturers. And mirror industry sources report that use of silver in mirrors has increased from 900,000 troy ounces in 1983 to 1.2 million ounces in 1986.

This steadily increasing demand for silvered mirrors, according to the **Mirror Manufacturers (NAMM)** in Potomac, MD, is due, in great part, to two things: one, an improvement in the quality of mirrors; and two, interior designers now have a greater appreciation of the values of mirrors in both residential and commercial applications.

Regarding the first point, the NAMM reports: "Today's mirrors are better in every way from those made just a decade ago. Surfaces are flatter and there are fewer surface and internal imperfections. State-of-the-art technology is employed to assure a better sheet of glass for silvering. *Silvering methods have improved to provide maximum depth and reflectivity.* Better copper solutions and baked enamel coatings protect the silvering for long-lived performance."

And through an Annual Design with Mirrors Contest, sponsored by NAMM in cooperation with the **American Society of Interior Designers,** interior designers have won prizes of between $1,000 and $2,500 to encourage them to turn their thoughts to the creative and practical aspects of the architectural use of mirrors. NAMM full-color booklets feature photographs *(at left)* and descriptions of contest entries that can serve as "inspirational" or reference booklets for other interior designers.

FAMOUS ARTISTS + SILVER = PRECIOUS ART

In the depths of **Hecla Mining Company's** "Lucky Friday" silver mine in Coeur d'Alene, Idaho, a famous artist sketches the mine, mining equipment and silver miners at work.

From those sketches, **Deborah Copenhaver**, 3010 South Grandview, Spokane WA 99204, creates a finished drawing of a mature, dignified miner leaving the mine at the end of his work day. She calls the work, "Deep Enough . . . "

Then, from paper to a wax model, and using the lost wax process, it is then cast in fine silver. And 500 troy ounces of pure silver are taken from Hecla's mines to **The Maiden Foundry**, in Sandy, Oregon. There, the talents of Ms. Copenhaver, Mike Maiden and his team of 30 skilled artisans combine with the wonderful qualities of silver to produce a beautiful statue (*at right*).

"Deep Enough . . ."

The finished 30" statue of a silver miner was presented in recognition of and appreciation for the many years of service of the retiring Chairman of the Board of Hecla Mining Company, William A. Griffith.

In its 11 years of operation, the heaviest pure silver statue poured by The Maiden Foundry is the "Silver Spirit" by **Bill Killen** of Medford, Oregon. **This 2,400 troy ounce, 4 foot tall rendering of an American Eagle** *(at left)* **is the heaviest known pure silver statue in the world**—recently appraised at $250,000.

"Silver Spirit"... 2,400 ounces of pure silver.

In 1986, the Maiden Foundry dedicated a new 4,500 square foot area dedicated **exclusively** to the production of pure silver and gold original works of art by well-known, successful sculptors. Most of the statues weigh between 100 and 500 troy ounces.

Commenting on the market, Maiden's Executive Vice President of Sales, Bob Walker says, "Their success in the market place is phenomenal. Both collectors and investors, with an eye on the future, have bought up entire editions."

Additional information may be obtained by writing to **The Maiden Foundry, 16600 S.E. 362nd, Sandy, OR 97055 or by calling 1-800-422-8852.**

EVERY CLOUD HAS A SILVER LINING

In the "Smart Money" column of the November 1986 issue of *Sylvia Porter's Personal Finance Magazine*, Nancy Dunnan writes "there's a cloud over silver. But that's actually good news for investors who are contrarians, those who believe the right time to buy an investment is when it's out of favor and low in price." Then she added that at the time of writing, silver was trading near the decade low of $4.81.

The magazine's clip-out description of the basics of investing in silver called the risk factor "Medium to High" and suggested $2,000 as a minimum investment. What would have happened if a "contrarian" had invested $2,000 in silver when it was selling for $5 per ounce? This investor would have received 400 ounces of silver. And if the 400 ounces had been sold on July 30, 1987 at the COMEX closing settlement price of $8.315 our "contrarian" would have received $3,326. That would have been a pretty nice "silver lining."

But some people haven't seen the "silver lining." On July 30, the nation's press carried headlines about the latest record-breaking advance of Dow Industrials, but ignored silver. However, when one looks at *USA Today*'s "Key Indicator" for July 30, the reader finds that although the value of the Dow Industrials rose 18.9% in the last six months, silver's value increased 47.8%! **More than any of the other "Key Indicators"!**

1987 Silver Prices

1987	High	Low	Average
to Date	*11.25*	*5.35*	*6.77*
Jul. 87	8.30	7.16	7.72
Jun. 87	8.09	6.75	7.43
May 87	9.52	7.35	8.44
Apr. 87	11.25	6.23	7.36
Mar. 87	6.39	5.41	5.43
Feb. 87	5.54	5.37	5.49
Jan. 87	5.70	5.35	5.54

COMEX

Annual Silver Prices 1977-1986

Year	High	Low	Average
1986	6.19	4.87	5.46
1985	6.73	5.57	6.14
1984	10.03	6.26	8.14
1983	14.74	8.34	11.44
1982	11.21	4.88	7.94
1981	16.45	7.95	10.51
1980	48.00	10.80	20.63
1979	28.00	5.96	11.09
1978	6.29	4.82	5.40
1977	4.96	4.30	4.62

COMEX

CONTINUED DECLINE IN OLD SCRAP SILVER REFINING

Year-to-date declines in secondary silver refining from old scrap offset increased primary refined production in both the U.S. and non-U.S. Silver Institute refining series. Average monthly total production in the U.S. in the January through June period of 1987 was 100,000 troy ounces less than during the same period in 1986. It was also down 100,000 in the non-U.S. category.

LATEST SILVER INSTITUTE REFINING STATISTICS

Production and Disposition of 999 Silver by All Known Refiners in the United States

	TROY OUNCES		MILLION TROY OUNCES		
	June 1987	May 1987	Jan-Jun 1987	Jan-Jun 1986	Full Year 1986
THESE REFINERS' PRODUCTION, BY SOURCE			MONTHLY RATE		
From Primary (ores & concentrates)	3,117,009	3,728,002	3.2	3.0	2.9
From Coins	0	0	0.0	0.0	0.0
From Old Scrap (used photo film & other products)	2,730,426	2,742,224	2.4	2.6	2.2
From New Scrap (in-plant clippings, waste)*	1,991,396	2,002,777	2.0	2.2	2.4
TOTAL PRODUCTION	7,838,831	8,473,003	7.6	7.7	7.5
DISPOSITION BY THESE REFINERS					
Converted in Plant (consumed in fabricating, etc.)	4,224,668	4,236,558	3.7	4.3	4.0
Shipped Out as 999 Silver	4,030,475	4,036,567	3.9	3.4	3.4
TOTAL DISPOSITION	8,255,143	8,273,125	7.6	7.7	7.5
RESULTING CHANGE OF THESE REFINERS'			TOTAL FOR PERIOD		
STOCKS (Production Minus Disposition)	-416,312	199,878	0.0	0.2	0.3
THESE REFINERS' STOCKS AT END OF PERIOD	314,630	730,942	0.3	0.3	0.4

Production and Disposition of **999 Silver** by All Known Refiners in Australia, Canada, Mexico, Peru, South Africa, Sweden and West Germany; and some other Refiners in Europe and Asia.

	TROY OUNCES		MILLION TROY OUNCES		
	June 1987	May 1987	Jan-Jun 1987	Jan-Jun 1986	Full Year 1986
THESE REFINERS' PRODUCTION, BY SOURCE			MONTHLY RATE		
From Primary (ores & concentrates)	13,807,391	13,624,792	14.0	13.5	13.7
From Coins	135,990	126,754	0.1	0.4	0.3
From Old Scrap (used photo film & other products)	3,629,204	2,472,883	3.6	3.9	3.7
From New Scrap (in-plant clippings, waste)*	1,535,068	496,115	0.9	0.9	0.8
TOTAL PRODUCTION	19,107,653	16,720,544	18.5	18.6	18.5
DISPOSITION BY THESE REFINERS					
Converted in Plant (consumed in fabricating, etc.)	2,132,059	1,324,119	2.1	1.6	1.7
Shipped Out as 999 Silver	17,362,856	14,565,324	16.2	17.2	17.0
TOTAL DISPOSITION	19,494,915	15,889,443	18.3	18.8	18.7
RESULTING CHANGE OF THESE REFINERS'			TOTAL FOR PERIOD		
STOCKS (Production Minus Disposition)	-387,262	831,101	1.6	-1.1	-2.8
THESE REFINERS' STOCKS AT END OF PERIOD	6,531,541	6,918,803	6.5	6.6	4.9

*PRODUCTION From New Scrap is 999 silver made from in-plant clippings, spillage, sweepings, etc., generated during manufacturing processes.

THE SILVER INSTITUTE
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THE SILVER INSTITUTE LETTER

WORLDWIDE INFORMATION ON SILVER

VOLUME XVII NUMBER 5 OCTOBER 1987

MEXICAN SILVER CERTIFICATES SOLD OUT

On September 24, Mexico offered and sold four million troy ounces of newly mined silver—or five percent of its annual production—in the form of **silver certificates, "Certificados Plata"** or **CEPLATAs**. Each certificate has a value of 100 troy ounces of "good delivery" 99.9% pure silver.

The CEPLATAs were issued and guaranteed by a trusteeship headed by the official bank, **Banco de México.** The other three trustees: **Banca Cremi**, and two of Mexico's largest silver mining firms, **Industrial Minera México** and **Met Mex-Peñoles** are members of The Silver Institute.

M. Mancera, Banco de México (left) and J. Corredor, Banca Cremi (right) sign CEPLATA trusteeship papers.

The four million ounces of silver backing the CEPLATAs have been deposited in the Banca Cremi, Juarez 4, Mexico City 06050, México according to Hermilo Lopez Coello, Director of this bank's Metals and Minerals Division. He added, "Because of the dramatic success of this relatively small issue of CEPLATAs, **the trusteeship is studying the possibility of coming out with new and larger issues of silver certificates in the very near future."**

The Commercial Director of Industrial Minera México, Juan Sanchez Navarro R., said that although silver bars and coins have always attracted the Mexican public, the secure storage of large quantities of physical silver acted as a brake on any large scale Mexican silver investment activity.

Now, he continued, the CEPLATAs enable both Mexican and foreign investors to invest in silver in Mexico without having to worry about its physical security. And when they want to, investors can either exchange their CEPLATAs for physical silver or sell them. The public can buy or sell them at a price based on the international market spot price at the time of the transaction at all brokerage houses and participating banks in Mexico.

The Mexican government is encouraging investment in CEPLATAs by giving them favored tax status. In fact, in terms of taxes, the CEPLATA is reported to be the Mexican stock exchange's most attractive investment product.

The Silver Institute's Vice President for Latin America and President of another major Mexican mining firm, **Frisco, S.A. de C.V.**, Jorge Ordoñez, said that this is a very good measure because it shows that the government is definitely interested in promoting private holding of silver and in creating a new demand for silver; the CEPLATAs are available to investors of all nationalities, and they are freely convertible into physical silver.

SILVER MINES TO PROMOTE SILVER CONSUMER PRODUCTS

Six of the most important North American silver mining firms will plan and provide initial financing for a four-year campaign to expand the market for silver consumer and investment products such as silverware, jewelry and bullion coins.

The projected campaign calls for an annual expenditure of $2 million dollars. The six silver producing members of The Silver Institute that have announced their willingness to finance this silver promotion campaign through a 3-cent levy per troy ounce of silver produced are: **ASARCO Inc., Callahan Mining Corp., Coeur d'Alene Mines Corp., Hecla Mining Co., Noranda Sales Corp. and Sunshine Mining Company.** They hope other firms will support this program.

These silver producers recently selected an advertising firm, **DDB Needham World-wide**, to carry out a four-month market survey to assess the current image of silver and locate concentrations of potential silver consumers so as to fine-tune the focus of future advertising and marketing activities.

GREATER DEMAND SPARKS INCREASED SILVER MINE PRODUCTION

U.S. silver production fell from 39.4 million ounces in 1985 to 34.2 million ounces in 1986, but increased demand and the firming market for silver have enabled many closed mines to restart. Now, preliminary figures indicate that U.S. silver production will increase to 43.2 million troy ounces in 1987 according to projections in The Silver Institute's recently published annual ***Mine Production of Silver 1986-1990*** report.

Looking at the world, global silver mine production was flat in 1986 with production moving only slightly upward from 430.2 million troy ounces in 1985 to 431.6 million in 1986. For 1987, The Silver Institute report estimates that world mine production of silver will increase to 456.7 million ounces.

The projected ranking of the world's top ten silver producers for 1987 is as follows: Mexico, Peru, USSR, Canada, USA, Australia, Poland, Chile, Japan and North Korea.

Mine Production of Silver 1986-1990 was prepared with the participation of 235 mining entities throughout the world. They provided the Institute with the information and projections on mine production of silver in all of the 57 silver mining countries. This unique 11-page report is available from The Silver Institute for *only* US $25 (outside Canada, Mexico and the USA, add US $3.00 for airmail postage and handling).

BLACK AND WHITE PHOTOGRAPHY USED OVER 8,000,000 OUNCES OF SILVER

The increased speed and sharpness of silvered T-Max films and the advent of new, easy-to-use 35mm cameras has expanded the use of 35mm photography from the domain of the advanced amateurs and professionals, to the general public.

The result? Over 6 billion black and white photographs—using some 8.3 million troy ounces of silver—were taken during 1986.

"The new black and white films open a whole new range of creative possibilities for the photographer," explained Bob Spies, director of operations development for Kodak Processing Laboratories. "There are things you can do with black and white in terms of tonality and mood that you just can't do with color or electronic imaging."

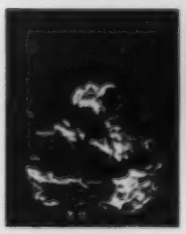
But, faced with the competition of electronic photography, what is the future of silver-halide photography? "For the average family, silver-halide photography will continue to be an important technology for capturing and saving memories in the year 2000," said Dr. Zygmunt Switkowski of Kodak's Photographic Products Group.

He attributed Kodak's expectations for continued growth in the number of silver halide photo exposures to: increased camera ownership worldwide, ongoing innovations in cameras and films, the overall convenience of conventional photography and the continuing sophistication of the photo-finishing industry. He added, "Electronic images are not hard-copy prints, and most never will be."

SILVER CHRISTMAS FORECAST

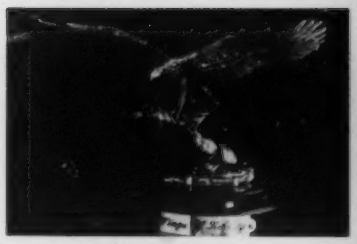
From New York City to Dallas to San Francisco, both manufacturers and retailers are forecasting a "Silver Christmas"—with a very visible resurgence of sterling silver jewelry and other sterling silver gifts for every pocketbook and for every taste.

Confirming its belief that sterling silver possesses an inherent beauty which lends a cool brilliance to **Tiffany & Co., N.Y.,** products, its Winter "blue book" is filled with sterling silver designer jewelry, golf clubs, Christmas ornaments, knives, picture frames, perfume flasks, baby cups and many other silver items priced from $28. **To order a gift or the Winter catalog, please call (800) 526-0649.**



The **Neiman-Marcus** Christmas catalog shows an attractive display of sterling silver designer jewelry and among its "BEST" gifts is a large sterling silver designer belt buckle with two racing horseheads for $1,360.

Also in Dallas, **Sunshine Bullion Co.** now includes sterling silver statuettes—in addition to a complete line of sterling silver jewelry, medallions and other gift items—in its Christmas Gift Catalog. **It can be ordered by calling (800) 274-5837.**



Award-winning artist, James Pounder, and Sunshine combined efforts to produce a limited edition of 50 numbered statuettes, "Wings of Liberty," portraying an eagle on a branch (*pictured*), poised for take off. It weighs seven ounces and is about four inches high. It is priced at $395.

Sunshine and famed artist, Maggie Murphy, have produced what promises to be an all-time favorite group of smaller, sterling silver baby animal sculptures, called **"Precious Playmates."** Each statuette in this group retails for $49.50; included are charming renderings of a fawn, tiny fledgling bird (*pictured*), frisky penguin, Koala, tiger cub, bunny, duckling and others. And **Cazenovia Abroad (315) 655-3433** offers a handmade sterling silver reindeer pulling an old fashioned sleigh (*pictured*) for only $1,250. Truly tomorrow's heirloom!

But for the unusual gift, San Francisco's 126-year-old **Gump's** specialty store will provide the animal-loving Christmas shopper with a small, extremely realistic sterling silver gorilla by Buccellati for only $1,950.

1987 AVERAGE SILVER PRICE 28% ABOVE 1986

1987 Silver Prices

1987 to Date	High *11.25*	Low *5.35*	Average *6.98*
Sep. 87	8.08	7.22	7.61
Aug. 87	8.80	7.23	7.81
Jul. 87	8.30	7.16	7.72
Jun. 87	8.09	6.75	7.43
May. 87	9.52	7.35	8.44
Apr. 87	11.25	6.23	7.36
Mar. 87	6.39	5.41	5.43
Feb. 87	5.54	5.37	5.49
Jan. 87	5.70	5.35	5.54

COMEX

Annual Silver Prices 1977-1986

Year	High	Low	Average
1986	6.19	4.87	5.46
1985	6.73	5.57	6.14
1984	10.03	6.26	8.14
1983	14.74	8.34	11.44
1982	11.21	4.88	7.94
1981	16.45	7.95	10.51
1980	48.00	10.80	20.63
1979	28.00	5.96	11.09
1978	6.29	4.82	5.40
1977	4.96	4.30	4.62

HANDY & HARMAN

As shown in the tables at left, the 1987 Average silver price to date was $6.98 as of the end of September. This is 28% above the 1986 Average price of $5.46.

During the August-September 1987 period silver continued as one of the top two leading gainers on *USA Today's* "Key Indicators" list.

"NEW SILVER TECHNOLOGY" PROVIDES INDUSTRY WITH MONTHLY UPDATES

During the past year, ***New Silver Technology (NST)*** has provided its subscribers with: valuable monthly listings of *all* papers and patents on silver; ten one-page summaries of the ten most important developments in silver technology each month; 100 digests of other patents and papers; and an easy-to-order system for obtaining complete papers or patents on selected subjects.

NST reported on a new silver photocell that can generate 200 volts, providing isolated areas with enough power to supply the area's needs for refrigeration, air conditioning and light; use of silver brazing for ceramic pads have the potential for doubling automotive engine life; and many other new uses of silver in the aerospace, contacts, batteries, automotive, optical, photographic, communications, bio-medical and other industries. ***NST* has proven to be the least expensive way of keeping up-to-date on the most important aspects of silver technology.**

Don't miss another issue of ***NST***. Send in your subscription order and check today!

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Washington, DC 20036

COINAGE PROGRAMS REDUCE THE U.S. SILVER STOCKPILE

The U.S. silver coin programs, including the Silver Eagle bullion coin and the silver Constitution coin have reduced the U.S. National Defense Stockpile from 136,005,707 troy ounces in March, 1986, to 115,181,707 troy ounces as of August 31, 1987. During this period, the U.S. Treasury drew 16,324,000 troy ounces for the U.S. coinage programs.

LATEST SILVER INSTITUTE REFINING STATISTICS

Production and Disposition of 999 Silver by All Known Refiners in the United States.

	TROY OUNCES		MILLION TROY OUNCES		
	August 1987	July 1987	Jan-Aug 1987	Jan-Aug 1986	Full Year 1986
THESE REFINERS' PRODUCTION, BY SOURCE			MONTHLY RATE		
From Primary (ores & concentrates)	3,623,608	3,495,368	3.3	2.8	2.9
From Coins	0	0	0.0	0.0	0.0
From Old Scrap (used photo film & other products)	1,204,643	2,750,313	2.3	2.3	2.2
From New Scrap (in-plant clippings, waste)*	2,902,631	2,531,267	2.2	2.0	2.4
TOTAL PRODUCTION	7,730,882	8,776,948	7.8	7.1	7.5
DISPOSITION BY THESE REFINERS					
Converted in Plant (consumed in fabricating, etc.)	3,493,813	4,574,143	3.8	3.8	4.0
Shipped Out as 999 Silver	4,444,480	3,503,443	3.9	3.2	3.4
TOTAL DISPOSITION	7,938,293	8,077,586	7.7	7.0	7.5
RESULTING CHANGE OF THESE REFINERS'			TOTAL FOR PERIOD		
STOCKS (Production Minus Disposition)	-207,411	699,362	0.4	0.8	0.3
THESE REFINERS' STOCKS AT END OF PERIOD	805,581	1,013,992	0.8	0.9	0.4

Production and Disposition of 999 Silver by All Known Refiners in Australia, Canada, Mexico, Peru, South Africa, Sweden, and West Germany; and some other Refiners in Europe and Asia.

	TROY OUNCES		MILLION TROY OUNCES		
	August 1987	July 1987	Jan-Aug 1987	Jan-Aug 1986	Full Year 1986
THESE REFINERS' PRODUCTION, BY SOURCE			MONTHLY RATE		
From Primary (ores & concentrates)	14,985,271	12,371,068	13.9	13.5	13.7
From Coins	357	134,826	0.1	0.3	0.3
From Old Scrap (used photo film & other products)	2,779,002	3,610,296	3.5	3.5	3.7
From New Scrap (in-plant clippings, waste)*	867,164	1,221,742	0.9	0.8	0.8
TOTAL PRODUCTION	18,631,794	17,337,932	18.4	18.1	18.5
DISPOSITION BY THESE REFINERS					
Converted in Plant (consumed in fabricating, etc.)	1,466,883	2,028,861	2.0	1.4	1.7
Shipped Out as 999 Silver	17,362,285	16,168,765	16.3	16.8	17.0
TOTAL DISPOSITION	18,829,168	18,197,626	18.3	18.3	18.7
RESULTING CHANGE OF THESE REFINERS'			TOTAL FOR PERIOD		
STOCKS (Production Minus Disposition)	-197,374	-859,694	0.5	-1.4	-2.8
THESE REFINERS' STOCKS AT END OF PERIOD	5,474,473	5,671,847	5.5	6.3	4.9

*PRODUCTION From New Scrap is 999 silver made from in-plant clippings, spillage, sweepings, etc., generated during manufacturing processes.

THE SILVER INSTITUTE

A WORLDWIDE ASSOCIATION OF MINERS, REFINERS, FABRICATORS AND MANUFACTURERS

INCORPORATED 1971

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THE SILVER INSTITUTE LETTER

WORLDWIDE INFORMATION ON SILVER

VOLUME XVII NUMBER 6 DECEMBER 1987-JANUARY 1988

SILVER EAGLE COINS DOUBLE 1986 SALES RECORD!

In 1986 the US Mint sold 5,096,000 pure silver American Eagle bullion coins, each weighing one troy ounce.

When the Mint celebrated the first birthday of the American Eagle bullion coin program, the Director of the Mint, Donna Pope, said that 8,810,000 of the silver American Eagle coins had been sold to date.

At that time, the Director of the Mint added that sales had been three times greater than anticipated. But the Eagle continued to fly...

During the first four weeks after the October 19 "Black Monday" crash of Wall Street's over priced paper securities, many investors added silver Eagle coins to their portfolios, as indicated below:

October 19-22	**250,000 coins**	**November 2-6**	**400,000 coins**
October 26-30	**350,000 coins**	**November 9-16**	**500,000 coins**

By the end of November the 1987 sales of the popular silver American Eagle bullion coin doubled those of 1986 by zooming past the 10,192,000 coin mark to 10,224,426. The month ended with cumulative 1986-1987 sales of 15,320,426 troy ounces.

MEXICO AND PERU TAKE 10,000,000 OUNCES OF SILVER OFF MARKET TO GUARANTEE SILVER CERTIFICATES

The world's largest producers of silver—Mexico and Peru—will produce 139.6 million ounces of silver in 1987. But **new internal markets have already taken over 7% of their combined production out of international markets.**

In September, Mexico offered and sold 4,000,000 troy ounces of newly mined silver in the form of silver certificates, or CEPLATAs. In October it sold another 3,000,000 ounces in CEPLATAs.

The CEPLATA has proven to be one of the most popular values on the Mexican stock exchange because of its favored tax treatment and because it is an excellent hedge against inflation and currency devaluations. More CEPLATA issues are planned.

The Peruvian Central Bank is reported to have put aside 3,000,000 troy ounces of silver for local sales. In November, it sold over 200,000 troy ounces of silver metal and silver certificates to the Peruvian public. No plans for further internal sales have been announced.

EXPANDING PHOTOGRAPHIC MARKET DEMANDS MORE SILVER

The photographic market continues to be the largest user of silver. In the western world, 46% of the mine production of silver (337 million troy ounces) was consumed by the photography industry.

In the U.S., there has been an 18% increase in the use of silver in photography over the past decade.

Jeffrey M. Christian of CPM Group, the international precious metals statistical analysis group, **predicts a 5% increase in western world use of silver for photography and a 6% increase in U.S. demand during 1988.** Additionally, the "third world" represents a virtually untapped market.

Silver Used in the Four Major Film Categories

First, there are **visible-light films which account for 45% of the silver** that is used by the photographic industry in the production of amateur roll films, professional cut films and motion picture films that are used for portraits, sports events, landscapes, etc.

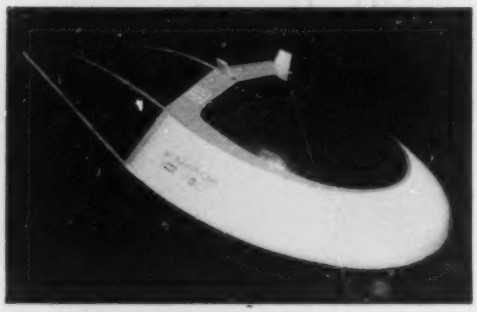
Second, some 35% of photographic silver is used in making **radiographic films** which are constructed to respond efficiently to X-rays.

Third, the **graphic arts films** are designed for high contrast and are responsive to laser and other high-intensity light for photo typesetting. They represent 15% of silver use.

Fourth, the remaining 5% of silver is used in the manufacture of **microfilm and microfiche**, where fine grain performance is paramount.

Future issues of ***The Silver Institute Letter*** will present a series of stories about trends in these different market areas.

GM SUNRAYCER USES SUN AND SILVER TO BREAK WORLD SPEED RECORDS



Until a few weeks ago, the world's speed record for a land vehicle powered solely by direct energy from the sun was 24.74 miles per hour. But this record was broken by the **sun and silver powered GM Sunraycer** *(pictured)* when it raced around a 5-mile circular track in Mesa, Arizona, at an average speed of 34.23 miles per hour. But the real test was yet to come.

This one-seat racing car was designed and built by GM Hughes Electronics Corp. for competition in one race—the **Pentax World Solar Challenge**—1,950 miles from the top of the Australian continent to the bottom.

On November 1, the GM Sunraycer left Darwin. For the next five days, a 90-foot solar array of 7,200 silver-connected solar cells assured this 19.7-feet long, 360-pound racing car of a reliable flow of 1,000 watts of power.

Silver-coated switch contacts channeled the current from the solar cells to the 68 silver-zinc high performance storage batteries, containing 15 pounds of silver, which stored and supplied the car with ample power during periods of reduced sunlight, acceleration and hill-climbing.

In addition, **silver switches and relays carried current to the 2hp electric motor, enabling the GM Sunraycer to average a record-breaking 43.5 miles per hour over a wide range of extreme climate, terrain and road conditions between Darwin and Adelaide.** It arrived at the finish line some 600 miles ahead of 24 other solar-powered racing cars from seven different countries.

ONLY 100 MAY OWN THE "END OF THE RAINBOW"

In an effort to symbolize the search for new opportunities in the wild frontier country of the American West, the world renowned sculptor, Lorenzo Ghiglieri, created "End of the Rainbow," **a 99.9% pure silver, 450 troy ounce statue of a Gold Rush prospector and his silver burro** at the moment of finding 1/10 ounce of "panners gold" from California streams in his silver pan.

This statue, measuring 10 inches in height and 17 inches in length, was produced by **The Maiden Foundry**, 16600 S.E. 362nd, Sandy, OR 97055, in October 1987 in a limited edition of 100. It is priced at $15,750 dollars. For additional information, please call (800) 422-8852.

SILVER ATHENIAN DECADRACHM SELLS FOR $600,000!

A silver Athenian decadrachm coin, containing about 1.4 troy ounces of silver, was sold for $600,000 to an anonymous businessman on November 5, 1987, by Numismatic Fine Arts, 10100 Santa Monica Blvd., Los Angeles, California 90067, acting on behalf of the Athena Fund, a Merrill Lynch limited partnership fund.

The silver decadrachm shows the goddess Athena and her owl. It weighs about 1.4 troy ounces (42.94 grams) with 35mm diameter.

The story of this silver coin starts in 465 B.C. at a time when top commanders of the Athenian army received large legal tender silver coins commemorating their victories—Athenian decadrachms. These coins were made, appropriately enough, from melted silver spoils of war.

In those ancient times, Athenian silver coinage was *the* world trade currency, and of this currency the decadrachms were equal in value to ten silver drachms, making them the highest value coins of the time.

The decadrachm exemplifies silver as a store of value because now, over 2,000 years later, the 25 surviving silver decadrachms are *still* among the most valuable coins in the world. A spokesperson of Numismatic Fine Arts commented, "Great coins always seem to realize increases that continuously outpace many other forms of conventional financial investments."

AVERAGE NOVEMBER SILVER PRICE 20% ABOVE JANUARY

During October, silver prices were subjected to strong downward pressures caused by the sale of silver to meet margin calls in equity markets and by fears of an economic recession.

However, these pressures were cushioned to some degree by widespread individual investor buying of physical silver. As a result, silver's price fluctuations were remarkably small compared to the volatility of Wall Street's paper values.

1987 Silver Prices

1987 *to Date*	High *11.25*	Low *5.35*	Average *7.00*
Nov. 87	7.33	6.19	6.66
Oct. 87	8.20	6.91	7.56
Sep. 87	8.08	7.22	7.61
Aug. 87	8.80	7.23	7.81
Jul. 87	8.30	7.16	7.72
Jun. 87	8.09	6.75	7.43
May. 87	9.52	7.35	8.44
Apr. 87	11.25	6.23	7.36
Mar. 87	6.39	5.41	5.43
Feb. 87	5.54	5.37	5.49
Jan. 87	5.70	5.35	5.54

COMEX

Annual Silver Prices 1977-1986

Year	High	Low	Average
1986	6.19	4.87	5.46
1985	6.73	5.57	6.14
1984	10.03	6.26	8.14
1983	14.74	8.34	11.44
1982	11.21	4.88	7.94
1981	16.45	7.95	10.51
1980	48.00	10.80	20.63
1979	28.00	5.96	11.09
1978	6.29	4.82	5.40
1977	4.96	4.30	4.62

HANDY & HARMAN

Although silver's price was slightly below the $7 level by the end of November, a look at the tables at left shows that silver is still an excellent store of value.

For example, if you bought silver at its average price in January 1987, your investment would have *increased* 20% in value. On the other hand, if you invested in paper values in January, it is very likely your investment is now worth 20% *less* than in January.

HUNTING FOR SILVER TREASURES

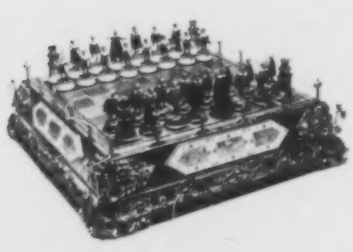
The words "silver treasure" cause a tingle of pleasure for almost everyone. But each person looks for a different "silver treasure," and this year there are silver treasures for every taste.

For the affluent serious chess player, what greater silver treasure could there be than the *pictured* **sterling silver chess set,** covered with gold vermeil, Cloisonné enamel, and set with amethysts and pearls from the Hungarian National Mint for only $52,000. Additional information may be obtained from **Cazenovia Abroad Ltd.**, Tel. (315) 655-3433.

For the student of Mexico, treasure might well be the gold accented **sterling silver statues of a Mexican Huichol Indian couple** *(pictured below)* that are available from one of Mexico's most prestigious silver makers, **Tane**, Amberes No. 70, Mexico DF 06600, Mexico Tel. (905) 525-1522.

For the collector of silver spoons, "treasure" might well mean the **"Atlas" sterling silver spoon** *(below)* commemorating **Tiffany's** 150th anniversary, costing $130 and listed as item "M" on page 42 of its "Holiday Selections" catalog. To order, please call (800) 526-0649.

Or, perhaps you want to own silver treasure from the wreck of the "Atocha" treasure ship. The Mexican Casa de Moneda has taken silver bullion from the "Atocha" and has used this silver and its original dies to mint beautiful **restrikes of the (*pictured*) 8 Reals 1681 coin.** The restrike, an "Atocha" look-a-like sterling silver chain and bezel, and a Certificate of Authenticity are priced at $99 at **Colonial Coins, Inc.**, 909 Travis, Houston, TX 77002. Tel. (800) 231-2392.



COINAGE PROGRAMS CONTINUE TO REDUCE THE U.S. SILVER STOCKPILE

The U.S. silver coin programs, which by law must draw their silver metal from the U.S. National Defense Stockpile, used 2,100,000 troy ounces during October. This purchase reduced the Stockpile from 114,881,707 troy ounces as of September 30, to 112,781,707 troy ounces as of October 30.

LATEST SILVER INSTITUTE REFINING STATISTICS

Production and Disposition of 999 Silver by All Known Refiners in the United States.

	TROY OUNCES		MILLION TROY OUNCES		
	October 1987	September 1987	Jan.-Oct. 1987	Jan.-Oct. 1986	Full Year 1986
THESE REFINERS' PRODUCTION, BY SOURCE			MONTHLY RATE		
From Primary (ores & concentrates)	2,936,842	3,637,983	3.3	2.7	2.9
From Coins	0	0	0.0	0.0	0.0
From Old Scrap (used photo film & other products)	2,613,147	2,294,850	2.3	2.2	2.2
From New Scrap (in-plant clippings, waste)*	1,141,648	1,769,875	2.0	2.2	2.4
TOTAL PRODUCTION	6,691,637	7,702,708	7.6	7.2	7.5
DISPOSITION BY THESE REFINERS					
Converted in Plant (consumed in fabricating, etc.)	3,023,408	3,314,925	3.7	3.9	4.0
Shipped Out as 999 Silver	3,338,003	4,376,275	3.9	3.2	3.4
TOTAL DISPOSITION	6,361,411	7,691,200	7.6	7.1	7.5
RESULTING CHANGE OF THESE REFINERS'			TOTAL FOR PERIOD		
STOCKS (Production Minus Disposition)	330,226	11,508	0.8	0.8	0.3
THESE REFINERS' STOCKS AT END OF PERIOD	1,148,315	818,089	1.1	0.9	0.4

Production and Disposition of 999 Silver by All Known Refiners in Australia, Canada, Mexico, Peru, South Africa, Sweden, and West Germany; and some other Refiners in Europe and Asia.

	TROY OUNCES		MILLION TROY OUNCES		
	October 1987	September 1987	Jan.-Oct. 1987	Jan.-Oct. 1986	Full Year 1986
THESE REFINERS' PRODUCTION, BY SOURCE			MONTHLY RATE		
From Primary (ores & concentrates)	15,064,647	16,614,310	14.3	13.6	13.7
From Coins	2,754	239,856	0.1	0.3	0.3
From Old Scrap (used photo film & other products)	4,120,226	3,247,826	3.5	3.7	3.7
From New Scrap (in-plant clippings, waste)*	1,792,939	710,322	1.0	0.8	0.8
TOTAL PRODUCTION	20,980,566	20,812,314	18.9	18.3	18.5
DISPOSITION BY THESE REFINERS					
Converted in Plant (consumed in fabricating, etc.)	2,979,424	1,560,347	2.1	1.6	1.7
Shipped Out as 999 Silver	16,613,557	19,632,608	16.7	16.8	17.0
TOTAL DISPOSITION	19,592,981	21,192,955	18.7	18.4	18.7
RESULTING CHANGE OF THESE REFINERS'			TOTAL FOR PERIOD		
STOCKS (Production Minus Disposition)	1,387,585	380,641	1.5	0.9	2.8
THESE REFINERS' STOCKS AT END OF PERIOD	6,481,417	5,093,832	6.5	6.8	4.9

*PRODUCTION From New Scrap is 999 silver made from in-plant clippings, spillage, sweepings, etc., generated during manufacturing processes.

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THE SILVER INSTITUTE LETTER

WORLDWIDE INFORMATION ON SILVER

VOLUME XVIII NUMBER 1 FEBRUARY-MARCH 1988

'86 SILVER JEWELRY SALES 66% ABOVE '84 SALES!

by Tiffany

In 1986, U.S. consumers bought 8.5 million pieces of silver jewelry, a 66% increase over the 5.1 million pieces sold in 1984, according to *National Jeweler's* 1987 Consumer Audit. This reliable jewelry trade publication's survey of 52,000 U.S. households also revealed:

- Dollar sales rose 59% from $342 million in 1984 to $544 million in 1986;
- Triple-digit increases in dollar sales were seen in neckware and bracelets;
- Unit sales of neckwear—the best selling category—and earrings almost doubled.

***National Jeweler* sources attribute silver's position as the leading growth category in the jewelry business to factors such as** "retailers are pushing it more," "affordable price," "women's heightened buying power—they want the finest and are willing to pay for it," "growing acceptance with fashionable women," "continued innovation in design," "silver is recognized as real jewelry and not considered costume anymore."

And in the October issue of another jewelry trade magazine, *Jewelers Circular-Keystone,* a 12-page section called "Sell Silver This Season" shows photographs of 53 different silver pieces and quotes John McGrath of Jondell as calling silver's resurgence part of the "renaissance of classicism" and adds that "other manufacturers agree that **classic refinement is the way silver will move in the future."**

SILVER MAKES WINTER DRIVING SAFER

If you are tired of scraping snow and ice off your windshield—or waiting for what seems like hours for your blower defroster to do the job, you will be happy to know that a new self-heating, silver-coated windshield can take care of the problem in less than *two* minutes!

In reality, **silver has been making winter driving safer for at least 18 years.** That was when the familiar little silver-ceramic paste heating lines started defrosting the back windows of cars throughout the northern climes of the world.

But the new silver-coated windshield is a spin-off from another technology—the development of the wonderful silver-coated glass that architects use in creating buildings of reflective glass that keep a building warmer in the winter and cooler in the summer with only minimum heating and air conditioning costs.

The new silver coating on windshields takes advantage of three of its outstanding properties: (1) A thin layer of silver is highly transparent, allowing the transmission of over 70% of visible light; (2) Silver is twice as reflective to solar thermal radiation as tinted windshield glass; and (3) Silver provides enough electrical resistance to heat and clears automobile windshields of ice and snow within two minutes.

A Market for 29 million ounces of silver!

It takes about ¾ ounce of silver to increase winter driving safety by installing **silver-coated *Insta-Clear* windshield. Ford Motor Co.** offered it as an option on its **Taurus, LTD, Sable, Lincoln and Marquis autos.**

General Motors will introduce its silver-coated *Electriclear Heated Windshields* as an optional feature in 1988.

The future market for silver-coated windshields is expected to equal that of the current market for cars equipped with silver defrosting stripes on their back windows.

As an example, if silver-coated windshields had been used in 1987, over 29 million ounces of silver would have been required to coat the windshields of the 39 million new cars in the U.S. and other northern countries that were equipped with heated back windows.

LINDA MEEHAN NAMED DIRECTOR OF SILVER INTERNATIONAL

"For the first time in history, North American silver mining firms have launched a major effort to expand the market for silver consumer and investment products such as silver jewelry, flatware, giftware and bullion coins. To accomplish this, **Silver International** has been established and one of the nation's leading precious metals marketing experts, **Linda Meehan,** (*pictured at right*) has been named to direct this program," according to an announcement made by **Silver Institute** Executive Director, John H. Lutley.

Ms. Meehan described **Silver International's initial priorities:** "As a start-up operation, we will be phasing in our projects. To begin with, primary focus will be on silver jewelry, but some publicity efforts will be devoted to tabletop and giftware In addition, we will be developing an educational program on investing in silver."

Before taking over the management of Silver International, Ms. Meehan held the position of Director of Marketing for **Cartier, Inc.** in New York City where she was responsible for all retail and wholesale marketing efforts.

Prior to Cartier, Ms. Meehan spent nearly seven years at **International Gold Corporation** where she directed the successful introduction of fractional Krugerrand bullion coins in the U.S., launched a successful jewelry promotion in Canada, and, afterwards, she served as Executive Manager of Intergold's North American Jewelry Division.

Other work experience includes the development and marketing of financial products to consumers for **Citibank.**

Silver International's office is located at 292 Madison Avenue, 5th Floor, New York City, New York 10017. Its activities are supported by six of the most important North American silver mining firms—all members of The Silver Institute.

The firms that are providing *initial* guidance and financing are: **ASARCO Inc., Callahan Mining Corp., Coeur d'Alene Mines Corp., Hecla Mining Co., Noranda Sales Corp. and Sunshine Mining Co.**

Mr. Lutley added, "This multi-million dollar program will increase demand for silver from silver producers throughout the world. Because of this, many other major silver mining firms in many nations are expected to participate in this program."

"SILVER IS AN AFFORDABLE INVESTMENT WITH VERY LITTLE DOWNSIDE RISK."

In 1981, the entire world used less than **6 million ounces** of silver in the minting of all of its silver money. But, in 1986, with the advent of the Silver Eagle bullion coin program, the U.S. alone consumed over 10 million ounces of silver for its coins.

And in 1987, with improvements in distribution systems and the expanding of the coin investment market, U.S. consumption of silver for the minting of bullion and commemorative coinages increased to 13.8 million ounces.

Several Silver Institute members have told us that two of the most important reasons for the nationwide popularity of silver coins as tangible investments is because "For most people, silver is *real* money" and secondly, "Silver is an affordable investment with very little downside risk."

Annual Silver Prices 1977-1987

Year	High	Low	Average
1987	10.20	5.36	7.01
1986	6.19	4.87	5.46
1985	6.73	5.57	6.14
1984	10.03	6.26	8.14
1983	14.74	8.34	11.44
1982	11.21	4.88	7.94
1981	16.45	7.95	10.51
1980	48.00	10.80	20.63
1979	28.00	5.96	11.09
1978	6.29	4.82	5.40
1977	4.96	4.30	4.62

HANDY & HARMAN

1987 Silver Prices

1987	High	Low	Average
Dec. 87	7.06	6.56	6.79
Nov. 87	7.33	6.19	6.66
Oct. 87	8.20	6.91	7.56
Sep. 87	8.08	7.22	7.61
Aug. 87	8.80	7.23	7.81
Jul. 87	8.30	7.16	7.72
Jun. 87	8.09	6.75	7.43
May. 87	9.52	7.35	8.44
Apr. 87	11.25	6.23	7.36
Mar. 87	6.39	5.41	5.43
Feb. 87	5.54	5.37	5.49
Jan. 87	5.70	5.35	5.54

COMEX

The tables at left illustrate the de facto limits of silver's "downside risk" during the past decade.

The 1977-87 Annual Price table shows that in 1977, the average price of silver for the year was $4.62. And the price of silver has never dropped that low again. This, then, has been an imaginary but de facto limit to silver's down-side risk over the past ten years.

U.S. GOVERNMENT RECOGNIZES EFFICACY OF SILVER WATER FILTERS

For over 35 years, Katadyn silver water purifiers have provided the world with an easy, inexpensive and successful method of purifying water. Its performance has been outstanding in many remote areas of the world where chlorine or iodine treatments are unreliable.

Now, the U.S. General Services Administration has finally awarded an open-ended contract to Silver Institute member, **Katadyn USA**, to supply the U.S. government with silver water filters.

This contract could lead to a major expansion of the silver water filter market in the U.S.A. because it permits all U.S. government agencies to order directly from Katadyn USA without conducting costly, time-consuming standard federal contract negotiations for each order.

In the past, U.S. governmental use of Katadyn silver water filters—that filter out all living organisms—has been limited to U.S. governmental organizations such as U.S. consulates in third world countries, the U.S. armed forces and the U.S. National Park services where the need for effective water purification systems outweighed the inconvenience of the bureaucratic procurement system.

For more information, in the U.S. please contact Katadyn USA, Telephone (602) 990-3131 or Telex 683-5045. In other countries. call Katadyn Products Ltd. in Wallisellen, Switzerland on Tel. 01/830-3677 or by Telex 57-799.

Silver Market Watch

CHINA PHOTOGRAPHIC INDUSTRY

In 1986, the Western World's photographic industry consumed 156 million ounces (or 46%) of the free world's mine production of silver. Japan, with a population of 119 million people consumed an additional 47 million ounces of silver, or 4/10ths of an ounce of silver per person.

The People's Republic of China has a population of roughly nine times that of Japan—1.04 billion people—with an equally strong interest in photography. This interest and the rapid growth of its purchasing power have absorbed the production of 1,000 black-and-white film factories and 20 camera factories with an annual production capacity of 500,000 cameras. In addition, as many as 300,000 cameras per year have been imported from Japan.

And now, The Silver Institute has learned that **Eastman Kodak, Fuji and Konika are constructing modern, high capacity color photographic film and sensitized paper manufacturing facilities in China .**

It will take many years for the PRC to catch up with Japan's per capita consumption of photography. However, some observers estimate that with an anticipated parallel growth of disposable income and the availability of photographic consumer products, the PRC could reach 25% of Japan's per capita use of silver for photography by 1990—more than 104 million ounces of silver!

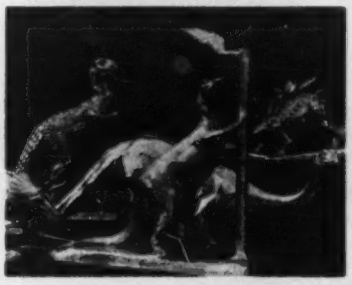
This would bring Western World plus Japan and PRC's use of silver for photography up to 260 million ounces—or 66% of the projected 394.6 million ounces of silver from free world mines in 1990.

SILVER DINOSAURS BY ONE OF AMERICA'S MOST FAMOUS SCULPTORS

Adrien Alexandre Voison (1890-1979) was once head sculptor at the palatial San Simeon estate of William Randolph Hearst, but he won lasting fame and gold medals in sculpture at international art exhibitions in Paris for his powerful and lovingly realistic sculptures of American Indians.

However, he was also a master at sculpturing animals, and in 1955 the U.S. government commissioned Sculptor Voison to **work with the Smithsonian Institute in the creation of six species of dinosaurs in miniature to exact natural dimensions** that could be used as models for lifesize sculptures.

Voison's original clay models were acquired by The Silver Works and, in 1987, it commissioned a pure silver limited edition consisting of only 12 sets of the fascinating Voison "family" of six dinosaurs.



The six pieces were cast by Silver Institute member, **The Maiden Foundry** in Sandy, Oregon, and they vary in weight from 70 to 235 troy ounces with a combined weight of 800 troy ounces of 99.9% pure silver. The tallest, the Anatosaurus, measures 11.25 inches high while the longest, the Brontosourus, measures 24 inches long.

Each of the 12 sets will be sold as a collection and will be accompanied by an 80 page, beautifully illustrated book on the Life and Sculpture of Andre Voison. **For additional information, please contact Mr. Bill Harmsen, President, The Silver Works, 6530 Saint Andrews Drive, Tucson, AZ 85718.**

COINAGE PROGRAMS REDUCE U.S. SILVER STOCKPILE

On March 31, 1986, the U.S. National Defense Stockpile held 136,005,707 troy ounces of silver. Since then, the U.S. silver coin programs, which by law must draw their silver from this Stockpile, have used 22,924,000 ounces of silver, reducing the Stockpile to 113,081,707 ounces as of December 31, 1987.

LATEST SILVER INSTITUTE REFINING STATISTICS

Production and Disposition of 999 Silver by All Known Refiners in the United States.

	TROY OUNCES		MILLION TROY OUNCES		
	December 1987	November 1987	Jan.-Dec. 1987	Jan.-Dec. 1986	Full Year 1986
THESE REFINERS' PRODUCTION, BY SOURCE			MONTHLY RATE		
From Primary (ores & concentrates)	3,287,502	3,239,598	3.3	2.9	2.9
From Coins	0	0	0.0	0.0	0.0
From Old Scrap (used photo film & other products)	2,716,225	2,588,426	2.4	2.2	2.2
From New Scrap (in-plant clippings, waste)*	3,019,874	1,127,461	2.0	2.4	2.4
TOTAL PRODUCTION	9,023,601	6,955,485	7.7	7.5	7.5
DISPOSITION BY THESE REFINERS					
Converted in Plant (consumed in fabricating, etc.)	4,942,399	3,117,066	3.7	4.0	4.0
Shipped Out as 999 Silver	4,949,024	4,096,704	4.0	3.4	3.4
TOTAL DISPOSITION	9,891,423	7,213,770	7.7	7.5	7.5
RESULTING CHANGE OF THESE REFINERS'			TOTAL FOR PERIOD		
STOCKS (Production Minus Disposition)	867,822	258,285	-0.3	0.3	0.3
THESE REFINERS' STOCKS AT END OF PERIOD	22,208	890,030	0.0	0.4	0.4

Production and Disposition of 999 Silver by All Known Refiners in Australia, Canada, Mexico, Peru, South Africa, Sweden, and West Germany; and some other Refiners in Europe and Asia.

	TROY OUNCES		MILLION TROY OUNCES		
	December 1987	November 1987	Jan.-Dec. 1987	Jan.-Dec. 1986	Full Year 1986
THESE REFINERS' PRODUCTION, BY SOURCE			MONTHLY RATE		
From Primary (ores & concentrates)	15,845,271	15,565,129	14.5	13.7	13.7
From Coins	145,227	7,904	0.1	0.3	0.3
From Old Scrap (used photo film & other products)	3,463,270	3,424,239	3.5	3.7	3.7
From New Scrap (in-plant clippings, waste)*	766,246	772,880	1.0	0.8	0.8
TOTAL PRODUCTION	20,220,014	19,770,152	19.1	18.5	18.5
DISPOSITION BY THESE REFINERS					
Converted in Plant (consumed in fabricating, etc.)	1,863,502	2,055,511	2.0	1.7	1.7
Shipped Out as 999 Silver	18,186,871	18,497,945	17.0	17.0	17.0
TOTAL DISPOSITION	20,050,373	20,553,456	19.0	18.7	18.7
RESULTING CHANGE OF THESE REFINERS'			TOTAL FOR PERIOD		
STOCKS (Production Minus Disposition)	169,641	783,304	0.9	2.8	2.8
THESE REFINERS' STOCKS AT END OF PERIOD	5,867,754	5,698,113	5.9	4.9	4.9

*PRODUCTION From New Scrap is 999 silver made from in-plant clippings, spillage, sweepings, etc., generated during manufacturing processes.

THE SILVER INSTITUTE
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INCORPORATED 1971
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THE SILVER INSTITUTE LETTER

WORLDWIDE INFORMATION ON SILVER

VOLUME XVIII NUMBER 2 APRIL-MAY 1988

SILVER ART, CEPLATAS, PHOTOGRAPHY, PROMOTION, U.S. COINS

Twenty-one members of the Silver and Gold Institutes created and presented an exhibition of over 300 beautiful silver and gold art objects, medallions, jewelry and coins to more than 200 enthusiastic persons attending a reception at the Annual Meetings of The Silver Institute and The Gold Institute on March 29, at the Hotel del Coronado in San Diego, California.

This unusual exhibit had an estimated value of over $1 million dollars and included items such as large silver ballet dancers, a combat scene between a silver bull and bear, a miniature orchestra, Christmas ornaments, a chess set, a gold and silver pheasant, a famous race horse, a replica of Remington's statue, "The Rattlesnake," six pure silver dinosaurs, several classic nude figures and many other **impressive works of art containing from 1 to 1,000 ounces of pure silver.**

In addition to this magnificent exhibition of silver art, the representatives and guests of members of The Silver Institute were given an excellent **review of the success of recent U.S. silver coinage programs by the Director of the U.S. Mint, Donna Pope.** In just the first three months of 1988, over 2.3 million troy ounces of silver have been used by the silver Eagle, Constitution and Olympic coin programs.

Attendees also learned more about Mexico's plans to continue and enlarge its CEPLATA program; received an update on the activities of Silver International in the promotion of silver consumer products; and had a look at the future role of silver in the photographic industry.

EXPERTS SEE HEALTHY GROWTH OF SILVER USE IN PHOTOGRAPHY

The world's consumption of silver for photography could increase by 22% in five years.

It is conservatively estimated that the industrialized world used 172 million troy ounces of silver for photography in 1987 and that between 200 and 210 million ounces will be needed by 1992, according to presentations by **Dr. Theodore F. Bolles,** Technical Director, 3-M Printing & Publications Systems, and **Peter Krause**, the retired President of Ilford, at the Silver Institute's Annual Meeting.

In the case of **amateur-professional films**, the steadily growing number of amateurs taking pictures in industrialized countries has already offset the decreases in silver content in photographic film over the past two years.

In fact, **the greatest growth is projected for color films for amateur-professional use.** It is estimated that in 1987 this sector consumed 48 million ounces of silver and will use 65 million ounces in 1992.

The use of silver in **X-ray film** production will also increase from an estimated 54 million troy ounces in 1987 to 64 million in 1992. This is because more people are being checked more frequently. And although electronic imaging is becoming more prevalent, most physicians prefer to study an X-ray hard copy using silver halide film.

In addition, industry is using more X-ray film to evaluate the quality of welds and the integrity of metals.

The use of silver in all other sectors of photography — except motion pictures — will also increase because, as Bolles and Krause agreed, **silver halide film will continue to provide the world's consumers with the sharpest, most accurate and most cost effective pictures on the market for many years to come.**

JAPANESE CONSUMPTION OF SILVER SOARS

As a result of Japan's concentration on the production of high-technology products, Japanese industrial consumption of silver has risen 46% in the past decade — from 63 million troy ounces in 1977 to 92 million ounces in 1987 — and over 180% during the past 20 years.

As in the U.S., the use of silver in Japanese photography leads all other uses. In 1987, Japan consumed over 51 million ounces of silver for photographs, up 9% from 1986 and more than double the consumption of a decade ago.

Other major areas of Japanese industrial demand for silver include electrical-electronic uses which leaped up 33% to 5.3 million ounces in 1987 from 4.0 million in 1986; another 2.2 million ounces were used in 1987 to supply Japan's demand for silver jewelry, an increase of 29% above the 1.7 million in 1986; and electroplating increased 53% from 3.2 in 1986 to 4.9 million in 1987. A variety of uses of silver nitrate accounted for a 10% increase to 8.3 million troy ounces in 1987.

MEXICO PLANS NEW ISSUE OF "CEPLATAS"

Mr. A. Escofet-Artigas

"Given the advantages of the silver certificates and the strong public demand for them, a new issue of 'CEPLATAS' is being planned," said the Senior Official of the Mining Sector of the Mexican Government, **Alberto Escofet-Artigas**, when he addressed the Institute's Annual Meeting.

He reviewed silver's current and future value to many important industrial and horticultural activities, and spoke in favor of the promotion of expanded industrial demand as well as demand for silver consumer products. In describing Mexico's silver certificates, or CEPLATAS, Mr. Escofet noted that Mexico issued its first CEPLATAS in 1987. Each CEPLATA is backed by 100 troy ounces of silver and may be exchanged in multiples of 11 per bar of 1,100 ounces.

He added that **these certificates are highly liquid and enable both Mexican and foreign investors to invest in silver in Mexico without having to worry about physical security.** In addition, investors can either exchange their CEPLATAS for physical silver or sell them at a price based on the international spot price at the time of the sale at all brokerages and participating banks in Mexico.

He added that **CEPLATAS have a favored tax status** in that the buying and selling of silver certificates is tax-free until a certificate is actually exchanged for a silver bar. At that time the holder of the physical silver would pay value-added tax on the amount of the transaction.

At this time 7 million ounces of silver, backing the CEPLATAS, are deposited with Mexico's Banca Cremi. Mr. Escofet was ably assisted by the **Director General Adjunto of the Banca Cremi (a member of The Silver Institute), Lic. Ignacio Bernal Verea**, during the question and answer session.

Additional information about the CEPLATA program should be addressed to **Lic. Hermilo Lopez Coello, Director Ejecutivo, Div. de Metales y Minerales, Banca Cremi. Av. Juarez 4, Piso 2, 06050 Mexico, D.F. Mexico. Tel. (905) 703-0333.**

CANADA ISSUES 23RD SILVER COMMEMORATIVE DOLLAR

For anyone with a love of history, a collection of Canadian silver commemorative dollars is a "must." In 1973, Canada's silver dollar celebrated the 100th anniversary of the Royal Canadian Mounted Police; in 1979, the "Griffon" ship that sailed the Great Lakes in 1679; and in 1988 the 250th birthday of the Canadian metals industry!

The coin's design at left depicts a typical 18th century scene in which two smiths, with hammers raised, are striking iron on an anvil. The base of the anvil carries the date 1738 which marks the year that the Quebec-based Saint Maurice Ironworks—the first industrial refinery in Canada—began operating.

The 1988 silver dollar is 50% silver, has a diameter of 36.07mm and weighs 23.33 grams. The selling price of the 1988 silver dollar is **US$ 16.70 for the proof version** (frosted relief on brilliant background) and **US$ 12.50 for the brilliant uncirculated version.** They may be ordered from the **Royal Canadian Mint, P.O. Box 457, Station A, Ottawa, Ontario, K1N 8V5.**

BANK-OWNED BROKERAGE TRADING SILVER BULLION

For several hours on April 8, an impressive display of Johnson Matthey silver bars and American Eagle silver bullion coins became the Number One attraction for more than one thousand persons who viewed this mountain of silver in the lobby of the First Union National Bank in downtown Orlando.

First Union Brokerage Services, Inc.'s Senior Vice President and Manager of Florida Brokerage Services, Richard M. Powers, used this display and short presentations on the advantages of precious metal investments to call attention to First Union's precious metals trading program in Central Florida.

This product responds to investor demands by giving them the ability to invest in silver bullion coins or bars in a banking environment. First Union began offering this product to Floridians in Jacksonville in January and "the response has been especially favorable."

First Union Brokerage Services is owned by First Union National Bank of Florida, headquartered at 200 West Forsyth Street, Jacksonville, FL 32231. It is the sixth largest bank in Florida with assets of $8.1 billion and 208 banking offices in 24 counties.

TIME IS RIGHT FOR SILVER INTERNATIONAL

During the recent Annual Meeting of The Silver Institute, the Director of Silver International, Ms. Linda Meehan, told the representatives of member firms that the time is right for a rebirth of silver in the American home.

"The changing American consumer affords silver a positive market opportunity. Marriage is back in style, increasing from 1.5 million in 1960 to 2.5 million in 1987, and it's traditional and more formal. This is good news for sterling silver table and gift products. . . Also, home entertaining and gourmet cooking are in style among the affluent, both married and single. Again this is an opportunity to sell sterling products."

In addition, there are more working women than ever before, more than 50 million. In fact, **the dual income family is now the norm,** and outnumbers the single paycheck family two to one. Ms. Meehan noted, "This is important for several reasons. **The household has more disposable income, so they can afford sterling silver tableware and gifts.** This also means that women have more money to spend on themselves, and a need to 'dress' for work – that means clothes and jewelry. Finally, consumer research tells us that people want 'quality' and 'the real thing.' Both are attributes of silver."

FOR FUTURE REFERENCE:

1988 Silver Prices

1988	High	Low	Average
Mar. 88	6.75	6.15	6.43
Feb. 88	6.59	6.08	6.33
Jan. 88	7.00	6.49	6.73

COMEX

Annual Silver Prices 1977-1987

Year	High	Low	Average
1987	10.20	5.36	7.01
1986	6.19	4.87	5.46
1985	6.73	5.57	6.14
1984	10.03	6.26	8.14
1983	14.74	8.34	11.44
1982	11.21	4.88	7.94
1981	16.45	7.95	10.51
1980	48.00	10.80	20.63
1979	28.00	5.96	11.09
1978	6.29	4.82	5.40
1977	4.96	4.30	4.62

HANDY & HARMAN

To take advantage of this positive market environment, **Silver International will focus its first efforts on silver jewelry because of the current growth of the total jewelry market and the popularity of silver jewelry right now.**

Silver International will have a full jewelry promotion program in 1988, but, as Ms. Meehan pointed out, it must have additional financial support if it is to go much further. Manufacturers and retailers will support Silver International's efforts through cooperative advertising and their own promotional efforts. **But more funding is needed from the international silver mining community if Silver International is to expand its generic programs and take full advantage of the opportunities that exist today in the marketplace.**

SILVER COINS AND MEDALLIONS HONOR OLYMPIC GAMES

Although the U.S. Mint didn't begin to mint its silver Olympic coin (pictured at left) until May 2, the public had already ordered 431,853 proof quality coins and 87,410 uncirculated coins by the end of March. So far, the silver Olympic coin has produced at least $3.6 million for the U.S. Olympic Committee. **The coin may be ordered from the U.S. Mint, 1988 Olympic Coins, P.O. Box 8140, Philadelphia, PA 19162-0024.**

Collectors of silver medallions should be pleased with the set of five beautiful medallions depicting team sports of skiing, equestrian, track and field, tennis and swimming (at right). They contain 1 ounce of 99.9% silver and the set can be purchased for only $195 from **Deak International Marketing Ltd., 29 Broadway, New York, NY 10006, Attention: U.S. Olympic Medallions.**

NEW MEMBERS WELCOMED TO SILVER INSTITUTE

So far, in 1988 the following companies have been welcomed to membership in The Silver Institute: **Cazenovia Abroad Ltd.**, 67 Albany St., Cazenovia, N.Y. 13035; **Continental Coin Corp.**, 5627 Sepulveda Blvd., Van Nuys, California 91411; **The Maiden Foundry**, 1600 S.E. 262nd, Sandy, Oregon 97055; **Minpeco USA, Inc.**, of Lima, Peru and 250 E. Hartsdale Ave., Hartsdale, N.Y. 10530; **Northwest Territorial Mint**, 295 E. Main, Auburn, Washington 98002; **Silver Editions**, 1525 State St., Suite 201, Santa Barbara, California 93101; **Silversmiths Group USA, Inc.**, 600 W. Hillsboro Blvd., Deerfield Beach, Florida 33441; **The Silver Works**, 6530 Saint Andrews Drive, Tucson, Arizona 85718; and **Tane**, Edgar Allan Poe #68, Colonia Polanco, Mexico 11560 D.F., Mexico.

LATEST SILVER INSTITUTE REFINING STATISTICS

Production and Disposition of 999 Silver by All Known Refiners in the United States.

	TROY OUNCES		MILLION TROY OUNCES		
	February 1988	January 1988	Jan.-Feb. 1988	Jan.-Feb. 1987	Full Year 1987
THESE REFINERS' PRODUCTION, BY SOURCE			MONTHLY RATE		
From Primary (ores & concentrates)	2,463,656	3,277,943	2.9	3.0	3.3
From Coins	0	0	0.0	0.0	0.0
From Old Scrap (used photo film & other products)	3,062,748	2,820,886	2.9	2.2	2.4
From New Scrap (in-plant clippings, waste)*	1,737,717	1,753,404	1.7	2.0	2.0
TOTAL PRODUCTION	7,264,121	7,852,233	7.6	7.1	7.7
DISPOSITION BY THESE REFINERS					
Converted in Plant (consumed in fabricating, etc.)	4,032,735	3,893,842	4.0	3.4	3.7
Shipped Out as 999 Silver	2,966,780	3,434,434	3.2	3.4	4.0
TOTAL DISPOSITION	6,999,515	7,328,276	7.2	6.8	7.7
RESULTING CHANGE OF THESE REFINERS'			TOTAL FOR PERIOD		
STOCKS (Production Minus Disposition)	264,606	523,957	0.8	0.7	-0.3
THESE REFINERS' STOCKS AT END OF PERIOD	810,771	546,165	0.8	1.0	0.0

Production and Disposition of 999 Silver by All Known Refiners in Australia, Canada, Mexico, Peru, South Africa, Sweden, and West Germany; and some other Refiners in Europe and Asia.

	TROY OUNCES		MILLION TROY OUNCES		
	February 1988	January 1988	Jan.-Feb. 1988	Jan.-Feb. 1987	Full Year 1987
THESE REFINERS' PRODUCTION, BY SOURCE			MONTHLY RATE		
From Primary (ores & concentrates)	13,380,701	17,502,270	15.4	14.4	14.5
From Coins	1,878	0	0.0	0.0	0.1
From Old Scrap (used photo film & other products)	4,298,206	3,316,087	3.8	3.8	3.5
From New Scrap (in-plant clippings, waste)*	1,503,826	776,654	1.1	0.8	1.0
TOTAL PRODUCTION	19,184,611	21,595,011	20.4	19.0	19.1
DISPOSITION BY THESE REFINERS					
Converted in Plant (consumed in fabricating, etc.)	2,225,158	1,905,062	2.1	2.3	2.0
Shipped Out as 999 Silver	17,472,941	17,777,477	17.6	15.9	17.0
TOTAL DISPOSITION	19,698,099	19,682,539	19.7	18.2	19.0
RESULTING CHANGE OF THESE REFINERS'			TOTAL FOR PERIOD		
STOCKS (Production Minus Disposition)	-513,488	1,912,472	1.4	1.8	0.9
THESE REFINERS' STOCKS AT END OF PERIOD	7,266,738	7,780,226	7.3	6.7	5.9

*PRODUCTION From New Scrap is 999 silver made from in-plant clippings, spillage, sweepings, etc., generated during manufacturing processes.

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THE SILVER INSTITUTE LETTER

WORLDWIDE INFORMATION ON SILVER

VOLUME XVIII NUMBER 3 JUNE-JULY 1988

AMERICAN EAGLE SILVER BULLION COIN SALES UP

Sales of the popular American Eagle 1 troy ounce Silver Bullion coins have averaged 892,500 coins per month during the first four months of 1988. **This represents a 17% increase over the 1987 monthly average of 764,000 coins.**

In 1986, the U.S. Mint sold 5,096,000 uncirculated silver American Eagle coins. Sales increased to 9,170,000 in 1987, and the Mint has already sold 3,570,000 of the uncirculated coins in 1988.

The U.S. Mint attributes the success of the American Eagle Silver Bullion coins to the fact that they are produced by the U.S. Mint and that their content and weight is backed by the U.S. Government. In addition, these silver coins are legal tender, universally recognized, have a very liquid market for resale and are easy to store and own.

In recent months, it has become easier than ever to buy and sell American Eagle Silver Bullion coins because **by simply calling 1 (800) USA-4653, a person may obtain an American Eagle Buyers Guide which lists participating banks, brokerages and coin stores in different regions of the U.S.A.**

GLOBAL USE OF SILVER IN COINAGE INCREASES

During a brief presentation at the XV Mint Directors Conference in Washington, D.C., the Executive Director of The Silver Institute, John Lutley, told several hundred Mint Directors and guests that Institute research indicates that more silver was used in coinage in 1987 than in 1986.

He said that The Silver Institute has compiled worldwide information on silver use in coinage from 1969 through 1987. During this period, a total of 417 million ounces of silver, averaging 23 million ounces per year, have been used in coinage.

"After 1965, most of the world's circulating coins ceased to contain silver, so all of the 417 million ounces have been used in commemorative and bullion coins.

"In the 1970s and early 1980s, use was driven to an important extent by Olympic coin programs in the German Federal Republic, Canada and Mexico. However, throughout this period, Austria and France maintained strong underlying commitments to major silver commemorative coins."

Turning to silver bullion coins, Mr. Lutley added, "It was only during the last part of the 1980s that we saw silver bullion coins become an important factor. These were pioneered by Mexico's 'Libertad' which went on sale for the first time in 1984. Now, the American Silver Eagle, which since its launch in 1986 has sold 18 million uncirculated coins, demonstrates that there really is a strong investment market for silver.

"After a low point in 1981 of 6 million troy ounces, worldwide silver use in coinage has grown each year. In 1986, 27 million ounces were used and we expect 1987 to be even higher at 30 million."

CPM GROUP ANALYZES SILVER MARKET FOR SILVER USERS

Silver prices could prove to be at their long-term lows based on market and economic fundamentals, according to the CPM Group. On May 4, CPM's Managing Director, Jeffrey M. Christian told the Silver Users Association in Washington, D.C., "The economist in us tells us that silver below $6.40 is a long-term bargain, and should not be expected to last."

"Conversely, the silver supply/demand balance is not so tight, or tightening so fast as to indicate that silver prices are about to run away on the upwardside either." He noted, however, that by September "silver could move into a higher trading range, with a ceiling of $7.50, $8.00 or even $8.50."

"Much of the course of silver beyond this summer will depend on the economy, and the economy, quite frankly, could swing either way in 1989. We have been saying that the stagflation of 1988 was most likely to give way to recession in 1989 or 1990. This still seems most likely to us, although an alternative

scenario is increasingly demanding attention. Under that scenario, current conditions would give way to renewed, stronger economic growth—another leg to the expansion that could last one to four years," said Mr. Christian.

"Should the recession scenario prevail, silver prices could be expected to go higher in 1989-1990, possibly to $10-$15 on a quarterly average basis. The alternative would be expected to moderate price rises at first but lead to a higher peak later on."

Silver demand does not "relate closely to any general economic indicators" in major user industries, CPM has found. Studies have shown a low correlation between silver prices and industrial demand over time, since "by and large, people use silver because they need it. Silver consumption in photography has been expanding through the past three or four decades except for a brief break in the early 1980s, with the growth loosely related to disposable income. Silver use in jewelry and silverware is most responsive to changes in overall economic activity. Price had little visible influence on silver use in these products. Silver use in the electronics industry is similarly affected, although to a much lesser degree.

"Mine production, meanwhile, responds to silver prices only marginally over the short term. The fact that real silver prices have remained at levels above the break-even costs of most mines during the past decade has reduced the impact of price changes. Changes in real economic activity have a greater influence on production levels than do prices," Mr. Christian said.

FOR FUTURE REFERENCE:

1988 Silver Prices

1988	High	Low	Average
May 88	6.77	6.28	6.55
Apr. 88	6.84	6.38	6.46
Mar. 88	6.75	6.15	6.43
Feb. 88	6.59	6.08	6.33
Jan. 88	7.00	6.49	6.73

COMEX

Annual Silver Prices 1977-1987

Year	High	Low	Average
1987	10.20	5.36	7.01
1986	6.19	4.87	5.46
1985	6.73	5.57	6.14
1984	10.03	6.26	8.14
1983	14.74	8.34	11.44
1982	11.21	4.88	7.94
1981	16.45	7.95	10.51
1980	48.00	10.80	20.63
1979	28.00	5.96	11.09
1978	6.29	4.82	5.40
1977	4.96	4.30	4.62

HANDY & HARMAN

"Secondary supply is significantly more price responsive than is mine output, with a 10% change in real silver prices prompting a 5% change in scrap recovery levels. It is too early to say for certain, but research that CPM is presently undertaking raises the possibility that secondary supply, which currently represents about 30% of overall supply, could be moving toward a long-term decline in coming years."

The CPM Group is a precious metals and commodities research and consulting organization located at 111 Broadway, Room 2105, New York, NY 10006. Tel. (212) 406-8075.

SILVER PINS ARE IN

Floral pin by Sunshine

In May the **Women's Wear Daily** newspaper's Fall Accessories magazine reports "Pins are the most explosive item in fashion jewelry for fall, continuing the popularity they have enjoyed since spring."

The May issue of **Jewelers' Circular Keystone** magazine carried a four-page illustrated story, "Silver Jewelry: Pin it!" which leads off with the statement, "Silver pins provide the answer to every fashion question this year. Whether used to jazz up a blouse, attach a scarf or adorn a lapel, silver pins do the job in style." For her shoe . . . glove . . . hat. "Indeed," reports Cindy Edelstein, "silver pins can be worn anywhere your customers dare." And she advised jewelers to, "Teach them the possibilities and watch your pins walk out the door."

To top it off, the May 16 issue of **National Jeweler** magazine carries a full-page, color photograph of 12 different styles of beautiful sterling silver pins by as many designers—all displayed under the title, "Getting Pinned."

Yes, silver pins are in!

SILVER GIFTWARE SALES UP 43% OVER 1987

"During the past three months, our sales of silver giftware have been running an average of 43% over 1987. In February sales were up 43%; in March, 36%; and in April, our sales reached 51% above April 1987," said Glen Trush of **Cazenovia Abroad Ltd.**, 67 Albany Street, Cazenovia, NY 13035. "Cazenovia Abroad provides the public with artistic silver gift items of the highest quality through a very effective nationwide distribution system."

REMINGTON'S FAMOUS "RATTLESNAKE" IN 999 FINE SILVER

For the first time ever, the Board of Directors of the Frederic Remington Art Museum have agreed to endorse the production of a limited edition of sculptures to be produced in silver by **Silversmiths Group U.S.A.**

"The Rattlesnake" (pictured at right), first in this series of famous Remington sculptures, will be cast under the Museum's supervision with a mold created from Remington's original masterpiece which is held by the museum.

According to the Chairman of Silversmiths Group U.S.A., Philip F. Friedman, "The Rattlesnake" will be strictly limited to **a numbered edition of only 100 exemplars and 5 Museum foundry proofs. Each sculpture will contain 1,000 troy ounces (70 pounds) of 99.9% pure silver.** Once the entire edition has been subscribed for, the original mold will be destroyed.

Each sculpture will be accompanied by an official hand-signed document attesting to its individual registry, total edition and silver purity. The owners of "The Rattlesnake" will become lifetime members of the Frederic Remington Art Museum with personally engraved precious metal indentification cards. A portion of the purchase price of each statue will be used to further work at the museum. For additional information, please contact **Silversmiths Group U.S.A., 600 W. Hillsboro Blvd, Deerfield Beach, FL 33441. Tel. (305) 421-2200.**

DO YOU COLLECT SILVER ART OBJECTS?

If you collect silver medallions, art bars or sculptures, you might be interested in joining the **International Ass'n. of Silver Art Collectors, 20113 Saticoy St., Canoga Park, CA 91306.** For more information about the club and a free copy of the IASAC's bimonthly "Silver Eagle," please send a self-addressed, stamped envelope to the above address.

NEW PRODUCTS ELIMINATE POLISHING AND TARNISHING!

After creating a British tabletop revolution, **Quickshine Silver Bath** is now helping Americans eliminate the need for traditional silver polishes and polishing drudgery.

According to Joel Koenig, Quickshine of America's President, this "Bath" is a passive, hi-tech, electrolytic and completely non-toxic cleaning product that cleans silver safely without the polishes, brushes, dips or the drudgery required by traditional silver polishing methods. Its passive cleaning abilities eliminate the danger of scratching or damaging silver.

Easy, no work, non-abrasive shine! Mr. Koenig says that all you need to do to shine your silver is to place your silver treasures on an unopened Quickshine sachet in the sink, or in a container and cover them with boiling water. Wait five minutes while the "Bath" removes tarnish from all of the surface areas of your silver, including the hard-to-reach areas, such as engraving, filigree and between fork tines. Then, remove your silver from the container, rinse in mild, soapy water and dry with a soft cloth . . . and see the shining beauty of your silver once again.

A box of four sachets of Quickshine Silver Bath has a suggested retail price of $9.95. For additional information please contact Mr. Koenig at **Quickshine of America Inc., 277 Fairfield Road, Fairfield, NJ 07006, Tel. (201) 227-4011.**

No future tarnish or dulling. Once your silver is clean, all you have to do to prevent your silver from tarnishing and dulling again is to wash and rinse your silver in regular dish water, and then quickly dry it with **The Silver Butler**—a very affordable, high quality cotton/terry silver drying towel. It can then be placed on the table without further rinsing because The Silver Butler is guaranteed to be non-toxic.

In describing how The Silver Butler has ended the "constant polishing bugaboo," the President of The Silver Butler Inc., Mr. F. Philip Slater, said that by always drying his silver with The Silver Butler, "The silver in my apartment in NYC (gas heat) has not seen silver polish in 18 years. The silver in my country house, where it is used only on weekends, has not been polished since 1976."

Many fine stores carry The Silver Butler, but if you need help in locating this product, please write or call: **The Silver Butler Inc., 30 West 11th Street, New York, NY 10011, Tel. (212) 420-1316.**

KODAK CONTINUES TO RELY ON SILVER

On page 29 of the Eastman Kodak Annual Report for 1987, under the sub-heading "Quality Pays" the following remarks are made: "Silver is a critical raw material in Kodak's success. Any improvement in using this vital emulsion ingredient pays immediate dividends. A chemical engineering research team investigated an emulsion-making procedure with state-of-the-art instruments and computer analysis. The result was process improvements that virtually eliminated waste in the silver-delivery system with a yearly savings of $3 million when the procedures are applied worldwide."

LATEST SILVER INSTITUTE REFINING STATISTICS

Production and Disposition of 999 Silver by All Known Refiners in the United States.

	TROY OUNCES		MILLION TROY OUNCES		
	April 1988	March 1988	Jan.-Apr. 1988	Jan.-Apr. 1987	Full Year 1987
THESE REFINERS' PRODUCTION, BY SOURCE			MONTHLY RATE		
From Primary (ores & concentrates)	2,875,808	3,097,416	2.9	3.1	3.3
From Coins	0	0	0.0	0.0	0.0
From Old Scrap (used photo film & other products)	3,407,463	2,052,525	2.8	2.2	2.4
From New Scrap (in-plant clippings, waste)*	1,673,055	4,302,703	2.4	2.0	2.0
TOTAL PRODUCTION	7,956,326	9,452,644	8.1	7.3	7.7
DISPOSITION BY THESE REFINERS					
Converted in Plant (consumed in fabricating, etc.)	4,426,977	5,616,529	4.5	3.5	3.7
Shipped Out as 999 Silver	3,408,487	4,007,743	3.5	3.8	4.0
TOTAL DISPOSITION	7,835,464	9,624,272	7.9	7.3	7.7
RESULTING CHANGE OF THESE REFINERS'			TOTAL FOR PERIOD		
STOCKS (Production Minus Disposition)	120,862	-171,628	0.7	0.2	-0.3
THESE REFINERS' STOCKS AT END OF PERIOD	760,005	639,143	0.8	0.5	0.0

Production and Disposition of 999 Silver by All Known Refiners in Australia, Canada, Mexico, Peru, South Africa, Sweden, and West Germany; and some other Refiners in Europe and Asia.

	TROY OUNCES		MILLION TROY OUNCES		
	April 1988	March 1988	Jan.-Apr. 1988	Jan.-Apr. 1987	Full Year 1987
THESE REFINERS' PRODUCTION, BY SOURCE			MONTHLY RATE		
From Primary (ores & concentrates)	15,073,852	16,218,386	15.5	14.1	14.5
From Coins	7,027	521	0.0	0.0	0.1
From Old Scrap (used photo film & other products)	4,124,999	4,448,553	4.0	3.9	3.5
From New Scrap (in-plant clippings, waste)*	843,956	1,292,627	1.1	0.8	1.0
TOTAL PRODUCTION	20,049,834	21,960,087	20.4	18.9	19.1
DISPOSITION BY THESE REFINERS					
Converted in Plant (consumed in fabricating, etc.)	2,349,826	2,354,921	2.2	2.3	2.0
Shipped Out as 999 Silver	18,078,987	20,580,205	18.5	16.3	17.0
TOTAL DISPOSITION	20,428,813	22,935,126	20.7	18.6	19.0
RESULTING CHANGE OF THESE REFINERS'			TOTAL FOR PERIOD		
STOCKS (Production Minus Disposition)	-378,979	-975,039	0.0	1.2	0.9
THESE REFINERS' STOCKS AT END OF PERIOD	5,912,730	6,291,709	5.9	6.1	5.9

*PRODUCTION From New Scrap is 999 silver made from in-plant clippings, spillage, sweepings, etc., generated during manufacturing processes.

THE SILVER INSTITUTE
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INCORPORATED 1971
1026 16th Street, NW, Suite 101, Washington, D.C. 20036. Tel. (202) 783-0500, Telefax (202) 783-2127

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THE SILVER INSTITUTE LETTER

WORLDWIDE INFORMATION ON SILVER

VOLUME XVIII NUMBER 4 AUGUST-SEPTEMBER 1988

PERU SETS STAGE FOR WITHDRAWAL OF SILVER FROM WORLD MARKET

On July 21, the government of Peru, the No. 2 producer of silver, announced a plan which could lead to a **withdrawal of 18% of the free world's silver production from the market for the next two years.**

With the objective of creating collateral for short-term loans to pay for imports, the Peruvian Central Bank will purchase most of Peru's silver production of more than 60 million ounces per year.

All silver produced by state-owned mines will be purchased by the Central Bank. In addition, most privately owned mines are expected to offer their silver to the Central Bank because of the very favorable price available to them.

Under the July 21 decree, Peruvian silver mines will be offered the international silver price plus a 15% bonus at the regular street rate of exchange (currently 190-195 intis to 1 U.S. dollar).

Existing sales contracts of both state and private companies are expected to be honored. However, because of the premium price, most companies are expected to sell their silver to the Central Bank as contracts expire.

408% INCREASE IN USE OF SILVER IN LEGAL TENDER COINS SINCE 1981

In 1988, the world used 30 million troy ounces of silver in the minting of 243 issues of coins in 69 countries, while only 5.9 million ounces of silver were used in worldwide coinage issues in 1981, according to the authoritative annual publication, ***Modern Silver Coinage 1987,*** published today by The Silver Institute in Washington, D.C.

In 1987, the United States was the leading user of pure silver in coinage issues. The U.S. $1 Constitution coins used 1.9 million ounces and the American Eagle Silver Bullion Coin consumed 10.3 million ounces. In total, they consumed 12.2 million ounces of silver, or more than *double* the amount used by the entire world in 1981.

The second largest user of silver for coinage in 1987 was the German Federal Republic which used 5.2 million ounces in the minting of two handsome numismatic commemorative coins, one marking the 750th Anniversary of Berlin and another the 30-Year Treaty of Rome. Germany had not issued silver coinage since 1979.

Although reporters focus their attention on silver bullion coins such as the American Silver Eagle or Mexican Onza, **the coin collecting or numismatic hobby is also in good health.** This is shown by the fact that of the 30 million ounces of silver that went into coinage, commemorative coins of 69 countries consumed 17.3 million ounces while silver bullion coins accounted for 12.7 million ounces.

Among the most popular silver commemorative coin themes were the Calgary Winter Olympics; Canadian explorations; Austrian historical sites; European Economic Unity; World Soccer Cup; Pope John Paul II; XXIV Summer Olympics in Korea and Chinese Year of the Rabbit.

Copies of this valuable, 63-page reference book, ***Modern Silver Coinage 1987*** may be obtained for only $33 from The Silver Institute.

WHY SELL THE STRATEGIC SILVER STOCKPILE?

A rumor that is occasionally heard in the halls of the U.S. Congress is that Congressman X or Y is going to propose additional sales from the U.S. strategic silver stockpile. Well, what's wrong with that?

To understand the impact of additional silver stockpile sales, one has to understand that the silver market is very delicately balanced, with supply and demand being almost exactly equal.

Therefore, the sale of stockpile silver into this type of market will almost certainly have a significant *depressing effect on the price.*

This would be very bad news for the U.S. silver mining industry which is just beginning to recover from the depressed markets of 1982 to 1987. During those hard years, many U.S. mines operated at a loss

for most of this period, and several of the largest had to close their doors.

Because of a modest recovery in 1987, a number—but not all—have recently reopened.

It would also hurt small investors. The American silver coinage programs, led by the silver Eagle are reducing the stockpile steadily at the rate of about 11 million ounces per year. These coins are largely absorbed by several million people who want to make a modest investment in precious metals and they see the Silver Eagle as the safe, economical way of doing this. This is an orderly way of reducing the silver stockpile *without damage to the silver market.*

These small investors would be hurt if the U.S. government should depress the silver price by dumping additional silver into the market, and sales of silver coinage would stop. So any profit from additional stockpile sales would be offset by reduced sales and profits previously generated by the coinage programs.

And finally, dumping the silver stockpile into the market would also **adversely impact on countries such as Mexico and Peru** that are major silver producers who are struggling to service their debt to U.S. banks. Against this background, it is hard to understand the motivation to sell more silver from the stockpile.

FOR FUTURE REFERENCE:

1988 Silver Prices

1988	High	Low	Average
July 88	8.06	6.53	7.12
June 88	7.31	6.54	7.03
May 88	6.77	6.28	6.55
Apr. 88	6.84	6.38	6.46
Mar. 88	6.75	6.15	6.43
Feb. 88	6.59	6.08	6.33
Jan. 88	7.00	6.49	6.73

COMEX

Annual Silver Prices 1977-1987

Year	High	Low	Average
1987	10.20	5.36	7.01
1986	6.19	4.87	5.46
1985	6.73	5.57	6.14
1984	10.03	6.26	8.14
1983	14.74	8.34	11.44
1982	11.21	4.88	7.94
1981	16.45	7.95	10.51
1980	48.00	10.80	20.63
1979	28.00	5.96	11.09
1978	6.29	4.82	5.40
1977	4.96	4.30	4.62

HANDY & HARMAN

SILVER'S VERSATILITY AND VITALITY DEMONSTRATED

After years of publication, each monthly issue of The Silver Institute's highly respected technical journal, **"New Silver Technology" (NST),** gives its readers 100 reports on new research and new patents covering the use of silver throughout the world's technical community.

Just a few items from the past three issues of NST show the versatility and value of silver:

- **Silver solders provide tough bond for automotive parts.** Silver solders bond tough ceramic-aluminum composite materials useful for internal combustion engine pistons, rocker arms and cylinders. Aluminum's light-weight and high ductility, when combined with the ceramics corrosion, wear and heat resistance, and using high strength solders, provide outstanding wear and thermal shock resistance as well as excellent strength at very high temperatures. (NST, March 1988, Page 1)
- **Temperature dependent silver reflective pigment.** A silver compound that changes its spectral reflectivity with changes in temperature shows promise as a temperature-dependent pigment. Work on developing this pigment as a thermal control coating to absorb heat during certain times of the year and reflect it during other times is ongoing for building use. (NST, April 1988, Page 8)
- **Natural silver salt has important medical value.** A silver salt from hyaluronic acid, found in human skin, eyes and connective tissue, tests high as a replacement for silver nitrate bacteriostatic solutions used in the eyes of newborn babies to prevent blindness. (NST, March 1988, Page 7)
- **Silver-graphite fiber composite forms superior contact.** A new graphite fiber-reinforced contact material provides outstanding performance for high-load circuit breakers. (NST, March 1988, Page 5)
- **New silver-based disinfectant has wide applications.** Silver ions combined with copper ions and methyl-ammonium polymer provide remarkable antimicrobial activity for disinfecting water storage tanks, food processing and dairy equipment, and swimming pools. (NST, March 1988, Page 10)

BEAUTIFUL "SCULPTURE IN SILVER" BOOKLET AVAILABLE

Art collectors who would like a booklet containing a set of 18 dramatic 8½ x 11, black and white pictures of pure silver statues by Andre Voisin, Jim Turpin and other famous artists of the southwestern U.S.A. may order same for US$10 from **The Silver Works,** 6530 St. Andrews Drive, Tucson, AZ 85718. Tel. (602) 299-5502.

SILVER JEWELRY ENDURING HIGH FASHION

According to the the results of Silver International's research, women who live in a metropolitan area, have a college education and work outside the home are the most likely purchasers of silver jewelry.

Research also revealed that these women have a very positive feeling about the historic origin of silver jewelry and the fact that it has been worn over the centuries.

At the same time they are proud of the history of silver, they think of silver jewelry as a fashion item and prefer their jewelry to be design oriented and contemporary in its design.

The results of Silver International's research have been incorporated within the planning of this organization's advertising and publicity which will appear during October, November and December, according to its Director, Linda Meehan. A photograph of one of Silver International's two-page black and white ads is seen above, greatly reduced. It will appear in magazines such as *Elle, Vogue, Harpers Bazaar, Vanity Fair, Self, "W"* and *Lear's.*

Silver International is located at **292 Madison Avenue, 5th Floor, New York, NY 10017. Tel. (212) 689-4737 and FAX #(212) 684-7714.**

INCENTIVE AWARDS—A $23 BILLION CHALLENGE TO THE SILVER INDUSTRY

When Tiffany & Co. entered the incentive award business in the 1850s with "presentation silver hollow-ware," yachting and racing trophies and "presentation swords and guns," it was a pioneer in what is now a thriving multi-billion dollar industry.

During 1987, U.S. companies spent $23 billion for premiums ($8 billion) and incentive awards ($15 billion). This excludes $4 billion spent on travel incentive awards.

Premium/Incentive Business Magazine's 15th Annual Industry Report says that the $15 billion spent on incentive awards was apportioned as follows: 48% to sales incentives, 31% to dealer incentives, 19% to business gifts and 1% to employee incentives.

Although silver is not listed as an award category, **silver products are sold to incentive award buyers under classifications such as pens, jewelry, art, tableware and "other."** And Tiffany & Co. is successfully marketing all of these product types to Incentive Award buyers in Tiffany's 11 branch cities, according to Michael A. D'Errico, Manager of the **Incentive Awards Department of Tiffany's Corporate Division, 5th Ave. & 57th St., New York, NY 10022.**

Contributing to Tiffany's success in selling to many of the Fortune 500 companies is "the magic of the Tiffany name"; a vast array of prestigious gifts always in good taste are available at virtually every budget level; over 70% of Tiffany's merchandise is created by its own award-winning designers; and superior service from program planning to delivery of the chosen award in Tiffany's world-famous blue box. For example, "Tiffany has four Corporate Account Executives and a Recognition Award Consultant to service Corporate clients in each of the 11 Tiffany Branch cities," said Mr. D'Errico.

But there are also opportunities for selling silver incentive awards on a smaller scale. Another Silver Institute member, Sunshine Mining Company, recently received a letter from the Spokane Valley Hospital and Medical Center. It described how 100 Children's Miracle Network Telethon 1-ounce pure silver medallions, minted by Sunshine, helped raise over $8,600. As a result, the hospital has ordered an additional 100 pure silver medallions for its next Telethon. It also told its story of the successful silver incentive to the Osmond Foundation in Salt Lake City and to 160 other hospitals. It is hoped that future silver awards can help thousands of other children. For further information, please contact **Sunshine Mining Company, Mint, P.O. Box 200, Hayden Lake, ID 83835-0200.**

Logo appeared on medallion.

SILVER MAPLE LEAF PLANNED

The Minister responsible for the Royal Canadian Mint, Otto Jelinek, announced that **the government has granted the Mint approval to produce and market a legal tender Silver Maple Leaf bullion coin.** It will be pure silver, having a fineness of 9999 ("four nines"). The Silver Maple Leaf will share the basic design motif of the Gold Maple Leaf coins and will be struck in one-ounce size and will bear a face value of five dollars (Cdn). Timing of the minting of this new coin will depend on "evolving market conditions."

LATEST SILVER INSTITUTE REFINING STATISTICS

Production and Disposition of 999 Silver by All Known Refiners in the United States.

	TROY OUNCES		MILLION TROY OUNCES		
	June 1988	May 1988	Jan.-Jun. 1988	Jan.-Jun. 1987	Full Year 1987
THESE REFINERS' PRODUCTION, BY SOURCE			MONTHLY RATE		
From Primary (ores & concentrates)	3,772,368	3,533,415	3.2	3.2	3.3
From Coins	0	85,000	0.0	0.0	0.0
From Old Scrap (used photo film & other products)	3,276,175	2,887,540	2.9	2.4	2.4
From New Scrap (in-plant clippings, waste)*	2,404,613	1,384,666	2.2	2.0	2.0
TOTAL PRODUCTION	9,453,156	7,890,621	8.3	7.6	7.7
DISPOSITION BY THESE REFINERS					
Converted in Plant (consumed in fabricating, etc.)	4,487,519	3,686,326	4.4	3.7	3.7
Shipped Out as 999 Silver	5,390,995	3,688,772	3.8	3.9	4.0
TOTAL DISPOSITION	9,878,514	7,375,098	8.2	7.6	7.7
RESULTING CHANGE OF THESE REFINERS'			TOTAL FOR PERIOD		
STOCKS (Production Minus Disposition)	425,358	515,523	0.8	0.0	0.3
THESE REFINERS' STOCKS AT END OF PERIOD	850,170	1,275,528	0.9	0.3	0.0

Production and Disposition of 999 Silver by All Known Refiners in Australia, Canada, Mexico, Peru, South Africa, Sweden, and West Germany; and some other Refiners in Europe and Asia.

	TROY OUNCES		MILLION TROY OUNCES		
	June 1988	May 1988	Jan.-Jun. 1988	Jan.-Jun. 1987	Full Year 1987
THESE REFINERS' PRODUCTION, BY SOURCE			MONTHLY RATE		
From Primary (ores & concentrates)	15,091,328	14,517,852	15.3	14.0	14.5
From Coins	0	1,387	0.0	0.1	0.1
From Old Scrap (used photo film & other products)	4,001,900	2,930,376	3.9	3.6	3.5
From New Scrap (in-plant clippings, waste)*	865,837	702,517	1.0	0.9	1.0
TOTAL PRODUCTION	19,959,065	18,152,132	20.2	18.5	19.1
DISPOSITION BY THESE REFINERS					
Converted in Plant (consumed in fabricating, etc.)	2,385,611	1,166,559	2.1	2.1	2.0
Shipped Out as 999 Silver	18,897,782	15,911,865	18.1	16.2	17.0
TOTAL DISPOSITION	21,283,393	17,078,424	20.2	18.3	19.0
RESULTING CHANGE OF THESE REFINERS'			TOTAL FOR PERIOD		
STOCKS (Production Minus Disposition)	-1,324,328	1,073,708	-0.2	1.6	0.9
THESE REFINERS' STOCKS AT END OF PERIOD	5,662,100	6,986,428	5.7	6.5	5.9

*PRODUCTION From New Scrap is 999 silver made from in-plant clippings, spillage, sweepings, etc., generated during manufacturing processes.

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